

Attorney's Docket No.:14580-031001

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of forming a vertical ferroelectric capacitor comprising forming a crystalline [[PZT]] ferroelectric layer by a process including the steps of:

depositing a layer of amorphous ferroelectric material [[over]] directly on a layer of a first electrically insulating material;

depositing a layer of a second electrically insulating material to cover the ferroelectric layer;

etching the ferroelectric: layer to form isolated ferroelectric elements which have exposed side surfaces;

providing a layer of a ~~second~~ conductive material ~~on at least the~~ in contact with each of the side surfaces of the ~~ferroelectric elements;~~ and

performing an annealing step to crystallize the ferroelectric material;
the ~~second~~ conductive material promoting crystallisation of the ferroelectric material to a higher degree than the first and second electrically insulating material materials, whereby the crystallisation proceeds substantially horizontally through each of the ferroelectric elements.

2. (Cancelled)

3. (Original) A method according to claim 1 in which the second material is TiO₂.

Attorney's Docket No.: 14580-031001

4. (Original) A method according to claim 3 in which the TiO_2 is formed by depositing Ti on at least the side surfaces of the ferroelectric elements, and oxidising the Ti to form TiO_2 .

5. (Original) A method according to claim 4 in which the Ti is oxidised to TiO_2 by chemical reaction with the ferroelectric material.

6. (Original) A ferroelectric device including a ferroelectric capacitor produced by a method according to claim 1.

7. (Original) A method according to claim 1 further including depositing electrode elements of conductive material between the ferroelectric elements.

8. (Original) A method according to claim 1 in which the ferroelectric material is PZT.

9. (Original) A ferroelectric capacitor produced by a method according to claim 1.

10. (Original) A FeRAM memory device including a ferroelectric capacitor produced by a method according to claim 1.

11-12. (Cancelled)